UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,448	10/15/2003	In Su Jung	2950-0273P	8842

2292 7590 10/02/2007
BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
LAMB, CHRISTOPHER RAY	

ART UNIT	PAPER NUMBER
2627	

NOTIFICATION DATE	DELIVERY MODE
10/02/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

PTOL-90A (Rev. 04/07)

Office Action Summary	**Application No.** 10/684,448	**Applicant(s)** JUNG ET AL.	
	Examiner Christopher R. Lamb	**Art Unit** 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 30 August 2007.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-10 and 16-23 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) 1,2,5-10,16,17 and 20-23 is/are rejected.
7)☒ Claim(s) 3,4,18 and 19 is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 27th, 2007 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 5, 6, 16, 17, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakata (US 2002/0101793 A1).

Regarding claim 1:

Sakata discloses:

A method for controlling movement of an optical pick-up unit, comprising the steps of:

a) performing a focus search operating on an optical disc and at the same time determining whether there is a reflection signal from the optical disc (the RF detection unit determines whether there is a reflection signal: paragraph 29. Since the reflection signal is from the recording surface of the disc, as described in paragraph 25, it must perform a focus search in order to receive it);

b) after performing the focus search operation, moving the optical pick-up unit toward a predetermined beginning point of the optical disc based on the result of the determining step (paragraph 35: the unrecorded area is "a predetermined beginning point" for future recording, as per paragraph 7); and

c) monitoring a level of an RF signal generated from the reflection signal from the optical disc, and determining the optical pick-up unit has moved to the beginning point of the optical disc when the level of the RF signal is lower than a predetermined level, while the optical pick-up unit is in motion (paragraphs 35-36).

Regarding claim 2:

The method of Sakata further comprises the step of:

d) if the optical pick-up has moved to the beginning point of the optical disc, performing a servo-tuning operation (paragraph 7: if it begins writing from this point, it must perform a servo-tuning operation as part of the write procedure, as per paragraph 31).

Regarding claim 5:

In the method of Sakata the step (b) is executed when a focus drive signal is held (paragraph 31).

Regarding claim 6:

In the method of Sakata the step (c) determines whether the optical pick-up unit has moved to the beginning point of the optical disc based on a PI (Pull in Error) signal as the RF signal generated by an RF unit (is is "as the RF signal generated by an RF unit" as in paragraph 29).

Regarding claims 16, 17, and 20:

In the claimed device, all elements positively recited have already been discussed with respect to the earlier method claims. No further elaboration is necessary.

4. Claims 1, 5, 6, 16, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishihara (US 6,449,222).

Regarding claim 1:

Ishihara discloses:

A method for controlling movement of an optical pick-up unit, comprising the steps of:

a) performing a focus search operation on an optical disc and at the same time determining whether there is a reflection signal from the optical disc (column 9, lines 20-25);

b) after performing the focus search operation, moving the optical pick-up unit toward a predetermined beginning point of the optical disc based on the result of the determining step (column 9, line 60 to column 10, line 60); and

c) monitoring a level of an RF signal generated from the reflection signal from the optical disc, and determining whether or not the optical pick-up unit has moved to the beginning point of the optical disc when the level of the RF signal is lower than a predetermined level, while the optical pick-up unit is in motion (column 10, lines 20-50).

Regarding claim 5:

In Ishihara the step (b) is executed when a focus drive signal is held (it is detecting the envelope of the RF signal: it must be holding the focus drive signal).

Regarding claim 6:

In Ishihara the step (c) determines whether the optical pick-up unit has moved to the beginning point of the optical disc based on a PI (Pull In Error) signal as the RF signal generated by an RF unit (it uses the envelope of the RF signal: column 9, lines 50-60).

Regarding claims 16 and 20:

In the claimed device, all elements positively recited have already been discussed with respect to the earlier method claims. No further elaboration is necessary.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 7-10, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakata in view of Yano et al. (US 5,608,702).

Regarding claims 7-10:

Sakata discloses a method as discussed in the rejection of claim 1. Sakata does not disclose a method of determining a type of disc.

Yano discloses a method to determine a type of disc (Fig. 3). Yano discloses this helps avoid malfunctions (column 1, lines 25-40).

It would have been obvious at the time of the invention to include in Sakata the method to determine the type of disc disclosed by Yano. The motivation would have been to avoid malfunctions.

Regarding claim 7:

Sakata in view of Yano discloses:

a1) performing a focus search operation at a beginning point of the optical pick-up unit in association with the optical disc when the optical disc is inserted into an optical disc apparatus, and at the same time determining whether there is a reflection signal from the optical disc (Sakata as discussed above; also Yano Fig. 3: step S4);

a2) moving the optical pick-up unit by a prescribed distance on the basis of the result of the step (a1) (Fig. 3: step S20); and

a3) performing a focus search operation for the optical disc at a position to which the optical pick-up unit moves, and at the same time redetermining whether there is a reflection signal from the optical disc (Fig. 3: step S21).

Regarding claim 8:

Sakata in view of Yano discloses wherein the step (a2) includes the steps of:

a21) outputting a command for moving the optical pick-up unit by a prescribed distance (this is taught by Yano in Fig. 3: step S20), and at the same time setting up a target number, corresponding to the prescribed distance, of output pulses of a driver for moving the optical pick-up unit (Sakata already contains this method of determining moving distance: paragraph 42);

a22) moving the optical pick-up unit, and detecting a counted value of the driver's output pulses generated while the optical pick-up unit is in motion (again, taught by Sakata paragraph 42), and

a23) determining whether the optical pick-up unit has moved by the prescribed distance by comparing the counted value with the target value of the driver's output pulses (again, taught by Sakata paragraph 42).

Regarding claim 9:

The method of Sakata in view of Yano further comprises the step of:

(e) discriminating a type of the optical disc based on the reflection signal (Fig. 3: steps S18 or S22).

Regarding claim 10:

In the method of Sakata in view of Yano the step (e) discriminates whether the optical disc is a 12cm-sized disc or an 8cm-sized disc (Fig. 3: steps S18 or S22, where the specific diameters are disclosed in column 4, line 60 to column 5, line 10).

Regarding claims 21-23:

In the claimed device, all elements positively recited have already been discussed with respect to the earlier method claims. No further elaboration is necessary.

Allowable Subject Matter

7. Claims 3, 4, 18, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 3:

The closest prior art of record, Sakata, does not disclose wherein the beginning point of the optical disc is an innermost data track of the optical disc. Instead, the beginning point is the beginning of an unrecorded area on the disc.

Ishihara is also close: however, Ishihara discloses wherein the beginning point is the first track after the lead-in area. Since the lead-in area is more inner than this track, Ishihara does not disclose wherein the beginning point is an innermost data track.

Regarding claim 4:

It is dependent on claim 3.

Regarding claims 18 and 19:

They are similar to claims 3 and 4.

Response to Arguments

9. Applicant's arguments filed June 27th, 2007 have been fully considered.

Applicant's arguments with regards to 102 rejections of claims as anticipated by Yano, and to the 103 rejections based on Yano, were persuasive. Those rejections have been withdrawn.

Applicant's arguments with regards to the 102 rejections of claims as anticipated by Ishihara are not persuasive.

Applicant argues that Ishihara does not disclose locating the beginning point of the optical disc. However, Ishihara discloses locating the beginning of the data area on the disc: this is “a beginning point” of the disc, and thus meets the language of the claim.

Applicant next argues that Ishihara does not disclose a focus search operation. Applicant argues that Ishihara discloses tracking servo but not focus servo control, and that focus servo control is not required by the disclosure of Ishihara.

However, Ishihara discloses detecting whether any information can be read from the disc. In order to read information, the beam must be focused on the recording layer. Therefore, a focus search operation has been conducted even if Ishihara does not explicitly disclose it. Furthermore, since Ishihara later measures the level of the reflected RF signal, Ishihara must be focused on the disc to measure this level.

Applicant next argues that even if Ishihara does perform a focus search operation, Ishihara does not perform a focus search and “at the same time” determine whether there is a reflection signal from the optical disc.

In an optical disc apparatus, the focused position is determined by detecting the reflected signal from the disc. It is this reflected signal that indicates to the apparatus that the beam is focused. It is impossible to focus on the disc without “at the same time” measuring the reflected signal, which necessarily includes determining whether or not the reflected signal exists.

Additionally, a new grounds of rejection has been applied in view of the newly discovered reference to Sakata as noted above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lamb whose telephone number is (571) 272-5264. The examiner can normally be reached on 9:00 AM to 6:30 PM Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CRL 9/20/07

/William Korzuch/

SPE, Art Unit 2627